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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/602,582	06/24/2003	John J. Breen	16356.803 (DC-04938)	1625

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TIBBITS, PIA FLORENCE	

ART UNIT	PAPER NUMBER
2838	

DATE MAILED: 04/26/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/602,582	BREEN ET AL.	
	Examiner	Art Unit	
	Pia F. Tibbits	2838	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *09 March 2006*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-24* is/are pending in the application.

4a) Of the above claim(s) *1-16* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *17-24* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

This office action is in answer to the amendment filed 3/9/2006. Claims 1-24 are pending, of which claims 1-16 are withdrawn, while claims 17 and 24 are amended.

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 17 and 24 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 17: the newly added recitation "(either of the charge or the discharge switches being opened in response to) **one of the electronics device or the controller**" contradicts a prior recitation, which states "each electronics device being coupled to the controller to **jointly control** charging and discharging". To continue prosecution it was assumed that the controller would not issue commands overriding alerts/messages from the (smart) electronics device of the Smart Battery, and therefore they **jointly control** the operation of the power supply.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 17-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Stanesti et al.** [hereinafter Stanesti][6977482] and **Smart Battery System Specification** @ http://www.sbs forum.org/specs/sbsel100.pdf.

US 6977482 is the published patent for publication 20040160213, used as a reference in the previous Office action.

The newly added limitation "one of the electronics device and the controller directing" was interpreted in light of the specification describing "The charge or the discharge switch is opened in response to either the smart electronics **or** the controller directing either of the switches to be opened" [see paragraph 0012], where "The smart battery includes a smart electronics (device)" [see paragraph 0012].

Stanesti discloses in figures 1-6 an information handling system/laptop computer [see column 3, line 30] comprising:

a processor CPU [see column 3, line 39];

a system bus [see fig.2; column 4, line32];

a power supply system operable to provide power to the processor, the bus and the memory [see fig.1], the power supply system being connectable to an AC adapter 104 for deriving power from an AC power source [see fig.2; column 3, line 46];

a controller 120 coupled to the processor and memory through the system bus, the controller 120 operable to control the power supply system [see fig.1]; and

wherein the power supply system includes:

a pair of smart batteries (1-k) [see fig.1; column 4, line 31] each capable of being individually selected to be operable, wherein each of the smart batteries includes:

an electronics device/"smart battery" hardware and software, each electronics device being coupled to the controller to jointly control charging and discharging of a rechargeable cell [see column 1, line 44]in the associated smart battery (1-k), each smart battery being coupled in series to a charge switch CSW_{1-k}, a discharge switch DSW_{1-k} [see fig.2, lines 18-21],

the charge and discharge switches being closed in response to one the electronics device and the controller being in agreement to charge one of the smart batteries, and either of the charge or the

discharge switches being opened in response to one of the electronics device/"smart battery" hardware and software or the controller 120 [see column 4, lines 34-40], and

a battery charger 222 operable to receive charge from the AC adapter 104 and provide the charge to a selected one of the smart batteries; and

a power source selector 214 operable to select either the smart batteries or the AC power source [see fig.2].

Stanesti does not disclose a memory coupled to the processor through the system bus, and each rechargeable cell being coupled in series to the charge switch CSW $_{1\text{-}k}$, and the discharge switch DSW $_{1\text{-}k}$.

As to a memory coupled to the processor through the system bus, it is an inherent function of a laptop computer to include a memory in order to continuously monitor the power supply, its functions, etc., and MPEP 2100 states that the disclosure of a limitation may be expressed, implicit or **inherent.**

The **Smart Battery Data Specification** is incorporated by reference in the **Smart Battery System Specification** and discloses that the Smart Battery by definition is a battery equipped with specialized hardware/electronics device that provides present state and calculated and predicted information to its SMBus Host under software control, and monitors its charge [see pages 2, 4, 5, 20] and its discharge [see pages 4, 42-44]. Therefore, it is an inherent function of the system disclosed by Stanesti and Smart Battery System Specification to include a memory in order to continuously monitor the power supply, its functions, etc., and MPEP 2100 states that the disclosure of a limitation may be expressed, implicit or **inherent.**

As to each rechargeable cell being coupled in series to the charge switch CSW $_{1\text{-}k}$, and the discharge switch DSW $_{1\text{-}k}$: it would have been obvious to one having ordinary skill in the art at the time the invention was made to use a charge switch CSW $_{1\text{-}k}$, and a discharge switch DSW $_{1\text{-}k}$ for each rechargeable cell, since it has been held that mere duplication of the essential working parts of a device involves only routine skill in the art, and it has no patentable significance unless a new and unexpected result is produced, see ***In re Harza***, 274F.2d 669, 124 USPQ 378 (CCPA 1960).

As to claims 18-24, see remarks and references for claim 17 above.

5. Claims 17-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over prior art disclosed by applicant **Shyr et al**. [hereinafter Shyr][5903764] and **Smart Battery System Specifications** @ http://www.sbs forum.org/specs/sbsel100.pdf.

Shyr discloses in figures 1-12 an information handling system [see fig.1a] comprising:

a processor CPU 32;

a system bus [see fig.1a];

a memory 32 coupled to the processor 32 through the system bus [see fig.1a];

a power supply system operable to provide power to the processor, the bus and the memory [see fig.1a], the power supply system being connectable to an AC adapter 71 for deriving power from an AC power source;

a controller 82 coupled to the processor and memory through the system bus [see fig.2a], the controller 82 operable to control the power supply system; and

wherein the power supply system includes:

a pair of smart batteries (A-B) each capable of being individually selected to be operable, wherein each of the smart batteries includes:

an electronics device/"smart battery" hardware and software, each electronics device being coupled to the controller to jointly control charging and discharging the smart battery (A-B), each battery being coupled in series to a switch 64a, 64b and the switches 64a, 64b being closed in response to the electronics device and the controller being in agreement to charge one of the smart batteries (A-B),

and either of the switches being opened in response to directions from the electronics device/"smart battery" hardware and software or the controller 120 [see column 5, lines 7-30], and a battery charger 26 operable to receive charge from the AC adapter 71 and provide the charge to a selected one of the smart batteries (A-B);

and a power source selector 102a operable to select either the smart batteries or the AC power source [see fig.1a].

Shyr does not disclose a rechargeable cell, and each rechargeable cell being coupled in series to a charge switch and a discharge switch.

As to a rechargeable cell, it is an inherent function of a "smart battery" to include a rechargeable cell in order to function as a power supply, and MPEP 2100 states that the disclosure of a limitation may be expressed, implicit or **inherent.**

Shyr discloses "smart batteries" (see manufacturer's specification). "Smart Battery" by definition is a battery equipped with specialized hardware/ electronics device that provides present state and calculated and predicted information to its SMBus Host under software control.

As to the charge switch being separable from the discharge switch: it would have been obvious to one of ordinary skill in the art at the time the invention was made to make separable the charge switch separable from the discharge switch in order to reduce the wear in the electronics, since it has been held that constructing a formerly integral structure in various elements involves only routine skill in the art. ***In re Dulberg***, 289 F.2d 522, 523, 129 USPQ 348, 349 (CCPA 1961). See MPEP 2144.04.

As to each rechargeable cell being coupled in series to a charge switch and a discharge switch: it would have been obvious to one having ordinary skill in the art at the time the invention was made to use a charge switch and a discharge switch for each rechargeable cell, since it has been held that mere duplication of the essential working parts of a device involves only routine skill in the art, and it has no patentable significance unless a new and unexpected result is produced, see ***In re Harza***, 274F.2d 669, 124 USPQ 378 (CCPA 1960).

As to claims 18-24, see remarks and references for claim 17 above.

6. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the

examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

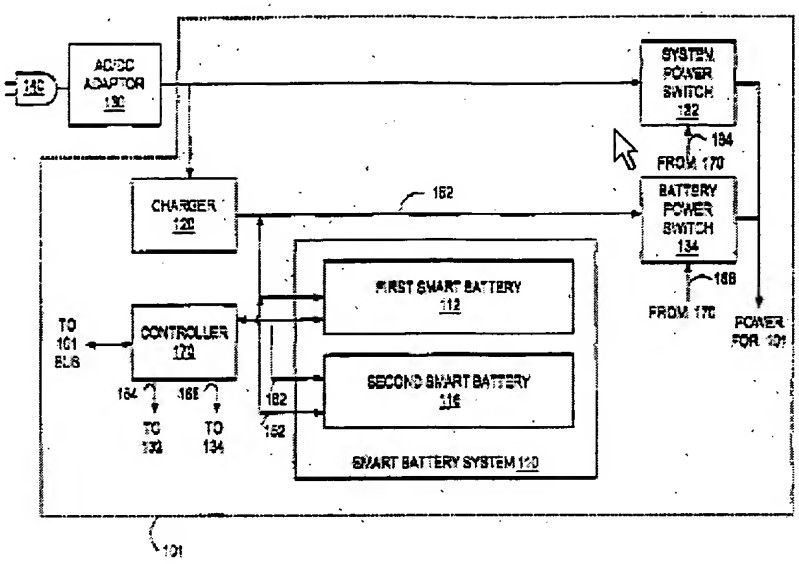
Response to Arguments

7. Applicant's arguments with respect to the claims have been considered but they are not persuasive: applicant amended claims 17 and 24 to include "the charge and discharge switches being opened in response to the electronics device and the controller being in agreement to charge one of the smart batteries, and either of the charge or the discharge switches being opened in response to directions from the electronics device or the controller", which is new issue.

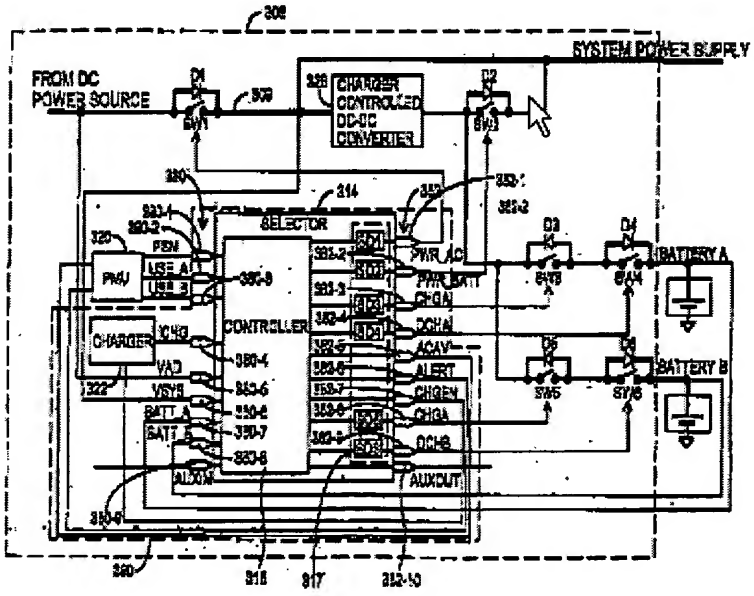
The instant application describes in the specification at paragraph 0033:

"To advantageously reduce occurrences of operating conflicts during a charge operating condition switches 114 and 115 are closed when both, the smart electronics 113 and the controller 170, agree that the first smart battery 112 is in the charge operating condition. When both are in agreement the smart electronics 113 generates outputs, which result in closing switches 114 and 115, the outputs being transferred via control lines 182 and 183. In case of a disagreement, the logic i.e., the operating condition determined by the smart electronics 113 prevails. Operation of switches 118 and 119 is similar. For example, when the controller 170 instructs the first smart battery 112 to charge but the first smart battery 112 is already fully charged then the first smart battery 112 is able to override the request from the controller 170 to prevent an overcharge condition. Similarly, if the controller 170 instructs the first smart battery 112 to charge but the battery 112 detects an over current or over temperature condition then the battery 112 is operable to disconnect itself and terminate the charge request",

and in fig.1:



The '482 reference describes in fig.3:



Therefore, the controller and the Smart Battery communicate with each other and operate according to feedback, so that the two circuits are equivalent. See ***MPEP § § 2183- 2184***.

Conclusion

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The prior art cited in PTO-892 and not mentioned above disclose related apparatus:

OZ982 SMB Smart Battery Selector, O2Micro, October 1996 @ http://www.o2micro.com/news/pr_961018.html discloses the OZ982 Smart Battery Selector, the only highly integrated smart battery selector device, having built-in analog switches and comparators, that complies to Intel's System Management Bus (SMBus) specification for Smart Battery Selector specification, release 1.0.

http://www.mcc-us.com/SBSRescue.pdf discloses a "Smart Battery", **a battery pack with added internal electronics** that can measure, compute, and store battery data, and one that can communicate with other SBS devices over the SMBus;

http://www.embedded.com/97/feat9611.htm discloses that Duracell and Intel have jointly created a standardized battery/power system interface and placed it into the public domain, including a "**smart battery**". This article describes this host-"smart battery" interface specification.

Sawyers [6888337] discloses an information handling system, as described in the instant application, except for the charge/discharge switches being separable.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Pia Tibbits whose telephone number is 571-272-2086. If unavailable, contact

the Supervisory Patent Examiner Karl Easthom whose telephone number is 571-272-1989. The Technology Center Fax number is 571-273-8300.

11. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

PFT

April 20, 2006

Pia Tibbits

Primary Patent Examiner